WHAT IS CLAIMED IS:

1. A catalytic converter system suitable for catalyzing the conversion of hydrocarbons, carbon monoxide, nitrogen oxides and other pollutants contained in a flowing exhaust gas stream, the converter system comprising:

a low temperature conversion catalyst material comprising a platinum group metal component dispersed on a refractory support material, said low temperature conversion catalyst material having a light-off temperature T_L of less than about 200°C, and being located relative to the flowing exhaust gas stream such that said low temperature conversion catalyst material is never exposed to a temperature in excess of about 550°C;

a hydrocarbon adsorbent material deposited on a refractory carrier, said hydrocarbon adsorbent material being capable of adsorbing hydrocarbons present in said flowing exhaust gas stream and of desorbing the adsorbed hydrocarbons when the temperature of said low temperature conversion catalyst material has exceeded said light-off temperature thereof; and

optionally, an upstream conversion catalyst material, said upstream conversion catalyst material, when present, being located upstream of said low temperature conversion catalyst material relative to the direction of flow of said flowing exhaust gas stream.

2. The converter system of Claim 1, wherein both said low temperature conversion catalyst material and said hydrocarbon adsorbent material are deposited on said refractory carrier.

3. The converter system of Claim 1, wherein said low temperature conversion catalyst is disposed in the muffler position under the floor of an internal combustion engine powered vehicle.

4. The converter system of Claim 1, wherein said low temperature conversion catalyst is disposed in the tailpipe position under the floor of an internal combustion engine powered vehicle.

5. The converter system of Claim 1, wherein said low temperature conversion catalyst material comprises platinum supported on titania; wherein said low temperature conversion catalyst material has been reduced to enhance its activity for converting hydrocarbons and carbon monoxide to innocuous compounds; wherein said adsorbent material comprises a hydrothermally stable molecular sieve material having a T(50) of at least about 750°C, a hydrocarbon selectivity greater than 1, and a Si/Al ratio of at least about 10; and wherein said low temperature conversion catalyst material is located relative the flowing exhaust gas stream such that it never is exposed to a temperature in excess of about 500°C.

6. The converter system of Claim 1, which comprises said optional upstream conversion catalyst material.

7. The converter system of Claim 5, which comprises said optional upstream conversion catalyst material.

8. The converter system of Claim 3, wherein said low temperature conversion catalyst material and said adsorbent material are disposed in separate layers on muffler plates located in the path of the flowing exhaust gas stream; and wherein said low temperature conversion catalyst material is never exposed to a temperature in excess of about 500°C.

9. The converter system of Claim 3, wherein said low temperature conversion catalyst material and said adsorbent material are disposed in separate layers on said refractory carrier and are located relative to the flowing exhaust gas stream such that said low temperature conversion catalyst material is never exposed to a temperature in excess of about 300°C.

10. The converter system of Claim 2, wherein said refractory carrier is in the form of a honeycomb-type configuration; and wherein said low temperature conversion catalyst material and said adsorbent material are present in separate layers deposited on the cell walls of said honeycomb-type configuration.

11. The converter system of Claim 2, wherein said refractory carrier is in the form of a honeycomb-type configuration; and wherein said low temperature conversion catalyst material and said adsorbent material are both present in the same layer deposited on the cell walls of said honeycomb-type configuration.

12. The converter system of Claim 3, wherein said refractory carrier is in the form of a honeycomb-type configuration; and wherein said low temperature conversion catalyst material and said adsorbent material are present in separate layers deposited on the cell walls of said honeycomb-type configuration.

13. The converter system of Claim 3, wherein said refractory carrier is in the form of a honeycomb-type configuration; and wherein said low temperature conversion catalyst material and said adsorbent material are both present in the same layer deposited on the cell walls of said honeycomb-type configuration.

14. The converter system of Claim 3, wherein said low temperature conversion catalyst material and said adsorbent material are both present in the same layer deposited on muffler plates located in the path of the flowing exhaust gas stream; and wherein said low temperature conversion catalyst material is never exposed to a temperature in excess of about 500°C.

15. The converter system of Claim 3, wherein said low temperature conversion catalyst material and said adsorbent material are both present in the same layer deposited on said refractory carrier; and wherein said refractory carrier is located relative to the flowing exhaust gas stream such that said low temperature conversion catalyst material never is exposed to a temperature in excess of about 300°C.

16. A method for reducing the pollutant emissions in the exhaust gas of an internal combustion engine, at least during a cold-start period of engine operation, comprising flowing the

exhaust gas through an exhaust system comprising the catalytic converter system of any one of Claims 1, 3, 4 and 5.

17. The converter system of any one of Claims 1, 3, 4 and 5, wherein there is from about 10 to about 1000 g/ft^3 of said platinum group metal in said low temperature conversion catalyst material.

18. The converter system of Claim 17, wherein said low temperature conversion catalyst and said hydrocarbon adsorbent material are supported on the same refractory carrier, said refractory carrier being in the form of a honeycomb-type configuration.

19. The converter system of Claim 18, wherein said low temperature conversion catalyst material and said adsorbent material are deposited in separate layers on said refractory carrier.

20. The converter system of Claim 17, wherein said low temperature conversion catalyst material has a light-off temperature of from about 70°C to about 100°C.

21. The method of Claim 16, wherein said temperature conversion catalyst material has a light-off temperature of less than about 100°C; and wherein said low temperature conversion catalyst material is disposed relative to the flowing exhaust gas stream such that it never is exposed to a temperature in excess of about 500°C.